

AMENDMENTS TO THE CLAIMS

A detailed listing of all claims that are, or were, in the present application, irrespective of whether the claim(s) remain(s) under examination in the application is presented below. The claims are presented in ascending order and each includes one status identifier. Those claims not cancelled or withdrawn but amended by the current amendment utilize the following notations for amendment: 1. deleted matter is shown by strikethrough for six or more characters and double brackets for five or fewer characters; and 2. added matter is shown by underlining.

1. (Currently Amended) A method for obtaining a transformed *Vitis vinifera* vine having a modified phenotype relating to a size of storage organs of the vine ~~[[or]]~~ and a quantity of ~~[[a]]~~ ~~tartrate composition of a~~ in the storage organs of the vine during a fructification stage, comprising the step of:

transforming at least one cell of the vine with a gene encoding the outward potassium channel encoded by SEQ ID NO: 1,

selecting the at least one transformed cell, and

regenerating a transformed vine from the transformed cell;

wherein the size of the storage organs and the quantity of tartrate accumulated in the storage organs at the fructification stage are increased.

2-3. (Cancelled)

4. (Previously Presented) The method according to Claim 1, wherein the gene is over-expressed.

5. (Cancelled)

6. (Previously Presented) A transformed vine of *Vitis vinifera*, obtained by the method according to Claim 1.

7. (Previously Presented) A method of selection of a *Vitis vinifera* vine based on a modified phenotype relating to a size of the storage organs of the said vine and/or a tartrate composition of said storage organs, the method comprising:

measuring the expression of a gene encoding an outward potassium channel encoded by SEQ ID NO: 1 of the vine in the cells of the storage organs or in the tissues supplying the storage organs.

8. (Cancelled)

9. (Previously Presented) The method according to Claim 7, wherein a quantity of mRNA derived from a transcription of the gene is measured, or a quantity of proteins resulting from the expression of the gene is measured.

10. (Previously Presented) The method according to Claim 9, wherein the measurement of the quantity of mRNA is carried out during the development of the storage organs, and the measurement of the proteins is carried out during or after the development of the storage organs.

11. (Currently Amended) A cell of a *Vitis vinifera* vine, wherein the cell over-expresses a gene encoding an outward rectifier potassium passage encoded by SEQ ID NO: 1, and wherein the size of a storage organ of the *Vitis vinifera* vine is increased with regard to *Vitis vinifera* vine that does not or less express the gene.

12. (Currently Amended) A *Vitis vinifera* vine, wherein the vine over-expresses a gene encoding an outward rectifier potassium channel encoded by SEQ ID NO: 1 of the vine, and wherein the size of a storage organ of the *Vitis vinifera* vine is increased.

13.-15. (Cancelled)

16. (Withdrawn) An antibody, wherein the antibody is directed against all or part of a polypeptide derived from the expression of a gene encoding an outward rectifier potassium channel of a plant.

17. (Withdrawn) The antibody according to Claim 16, wherein the gene encodes a polypeptide sequence having at least a 40% similarity with a polypeptide sequence deduced from the sequence encoding an outward rectifier potassium channel derived from *Vitis Vinifera* (VvSOR).

18. (Withdrawn) A method for detecting the presence of all or part of a polypeptide resulting from the expression of a gene encoding an outward rectifier potassium channel of a plant in a sample comprising a mixture of polypeptides, wherein it comprises the following stages:

putting the sample in contact with an antibody according to Claim 16, and
detecting an antigen/antibody complex formed.

19. (Withdrawn) The method according to Claim 18, wherein the gene encodes a polypeptide sequence having at least a 40% similarity with a polypeptide sequence deduced from the sequence encoding an outward rectifier potassium channel derived from *Vitis Vinifera*).

20. (Withdrawn) A kit for detecting all or part of a polypeptide produced from a gene encoding a potassium channel of a plant in a sample containing a mixture of polypeptides, wherein it comprises an antibody according to Claim 16.

21. (Withdrawn) The detection kit according to Claim 20, wherein the gene encodes a polypeptide sequence having at least a 40% similarity with a polypeptide sequence deduced from the sequence encoding an outward rectifier potassium channel derived from *Vitis Vinifera* (VvSOR).